

Southeast Asian Fisheries Development Center

Aquaculture Department

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Living with white spot disease in shrimp farming

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What is White Spot in shrimp?

It is a deadly disease caused by a virus called White Spot Syndrome Virus (WSSV). White Spot could obliterate your shrimp stock in just a few days.

Who brought White Spot to the country?

First reported in China and Japan in 1993, most shrimp farming countries already have it. Due to loose compliance with regulations on transfer of live shrimp, its spread throughout the world was a matter of time. It is now in the country to stay.



The Asian White Spot pandemic

What are the signs of White Spot?

Affected shrimp lose appetite followed by the appearance of moribund shrimp in a few days. Moribund shrimp has white inclusions or spots in the cuticle sometimes accompanied with red body coloration.



Infected shrimp

Can you contain White Spot within the affected pond?

Yes, but difficult. Water released from infected ponds could find its way to other ponds or farms. Wild crustaceans or even aquatic insect larvae are White Spot carriers.

Can you treat White Spot?

There is no silver bullet against White Spot. Once abnormal feeding is observed in intensive systems; shrimps are in trouble.

It is best to harvest your shrimps immediately for whatever value that is left. Affected shrimps are safe for human consumption.

So, is there a way to live with White Spot?

Yes, of course. The best strategy is to **prevent** its entry into your pond, and to avoid **stress** to your shrimps.

What are proven methods of preventing entry of White Spot into your ponds?

First is, thorough pond prep: dry, plow, harrow, and flush in several cycles, then apply lime (hydrated, ~ 2 t/ha) to pond and canals, in between cycles. White Spot carriers - wild crabs and small shrimps, should be removed. During culture, avoid trash fish feeding.



Dried pond bottom

Limed pond bottom



Second, during water filling, use reservoir-water only where settling occurred for at least 5 days. Water must be filtered or screened carefully to prevent entry of White Spot carriers.

Screened reservoir water



Third, maintain green water in your shrimp and reservoir ponds to control luminous bacteria; it aggravates White Spot. About 2 t/ha tilapia in the reservoir ensures green water. Also, tilapia-in-pen inside the shrimp pond helps maintain green water.



Green pond water

Fourth, stock fry that are White Spot free after 2 samplings (before PL10 and harvest). Fish health labs routinely perform this diagnosis using a nested PCR technique.

White spot free fry

